



26. (Reiterated) The protein of Claim 25, wherein said protein comprises an amino acid sequence selected from the group consisting of: SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:31, and SEQ ID NO:34.

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REMARKS

1. Rejection of Claim 11 under 35 U.S.C. 112, second paragraph

Claim 11 was rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, the Examiner noted the recitation of "wherein said protein comprises at least a portion of at least one amino acid sequence selected from the group consisting of" is indefinite because it is unclear whether "the portion" contains part of one of the sequences of the Markush group or part of several of the sequences.

In response to the Examiner's rejection, Applicants have, without prejudice or disclaimer of the subject matter thereof, amended Claim 11 to recite a portion of an amino acid sequence of the present invention.

In view of the foregoing amendments, Applicants respectfully request withdrawal of the Examiner's rejection of Claim 11 under 35 U.S.C. 112, second paragraph.

2. Rejection of Claims 1, 11-13, 16 and 17 under 35 U.S.C. 112, first paragraph

Claims 1, 11-13, 16 and 17 were rejected under 35 U.S.C. 112, first paragraph as not reasonably providing enablement for the claimed invention. The Examiner argued that the recited hybridization conditions only limit the claims to a protein encoded by nucleic acid molecules of any size and essentially any sequence because a nucleic acid molecule having relatively low homology might hybridize due to a small region of 100% identity. The Examiner further argued that the limitation that the protein binds selectively with an antibody raised against the recited protein SEQ ID NOS. encompasses proteins having a wide variety of function and structures and that the specification does not teach any examples of an antibody which will bind to the disclosed proteins or identify the epitopes of any of these sequences. The Examiner noted that the rejection could be overcome by removal of SEQ ID NOS. which do not include a zinc-binding domain, which the Examiner argued is an essential element of an astacin metalloendopeptidase, and amending the claims to include the limitation that the claimed proteins have astacin metalloendopeptidase function and are isolated from *D. immitis*.



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In order to expedite allowance of claims Applicants have amended the claims to recite *Dirofilaria immitis* proteins having astacin metalloendopeptidase activity as suggested by the Examiner.

In view of the foregoing, Applicants respectfully request withdrawal of the Examiner's rejection of Claims 1, 11-13, 16 and 17 under 35 U.S.C. 112, first paragraph.

3. Rejection of Claims 1, 11-13, 16 and 17 under 35 U.S.C. 112, first paragraph

Claims 1, 11-13, 16 and 17 were rejected under 35 U.S.C. 112, first paragraph as containing subject matter which was not described in the specification in such a way as to convey that the inventors had possession of the claimed invention and suggested that the rejection could be overcome by removal of SEQ ID NOs. which do not include a zinc-binding domain, and amending the claims to include the limitation that the claimed proteins have astacin metalloendopeptidase function and are isolated from *D. immitis*.

In order to expedite allowance of claims Applicants have amended the claims to recite *Dirofilaria immitis* proteins having astacin metalloendopeptidase activity as suggested by the Examiner.

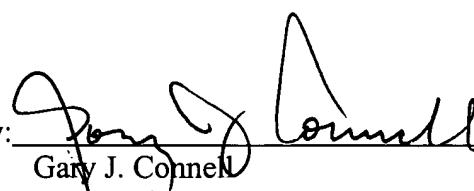
In view of the foregoing, Applicants respectfully request withdrawal of the Examiner's rejection of Claims 1, 11-13, 16 and 17 under 35 U.S.C. 112, first paragraph.

In view of the foregoing amendments and remarks, Applicants submit that all pending claims are in condition for allowance. Consideration of the above and withdrawal of all rejections are hereby requested. In the event that the Examiner has any questions regarding Applicants' position, the Examiner is invited to contact the below named Patent Agent at (303) 863-9700.

Respectfully submitted,

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Date: 11 Dec 2000